BROCADE 7500E EXTENSION SWITCH

DATA CENTER

Enabling Lower-Cost Global Data Mobility

HIGHLIGHTS

- Provides a simple, cost-effective Fibre Channel over IP (FCIP) storage and SAN extension solution for smaller enterprises, remote offices, and service providers
- Optimizes performance and resource utilization with Fast Write acceleration, storage-optimized protocol enhancements, and data compression
- Provides remote SAN connectivity while isolating IP WAN networks and SAN fabrics for increased resiliency and availability
- Provides high-availability features, including redundant power and cooling
- Simplifies deployment and management with easy-to-use Web-based tools for local and remote management
- Features a software license upgrade to activate additional ports and capabilities
- Protects investments through interoperability with existing Brocade switches and routers

Due to increased business and regulatory requirements, organizations of all sizes regularly need to move, share, and protect their data—but they often face significant challenges in doing so. For instance, smaller organizations might lack the dedicated resources, skills, or budgets for high-end data protection systems and business continuity. Larger enterprises might need to connect multiple remote sites in a robust manner, yet have limited budget to do so. And IP network service providers might need a proven remote connectivity solution that interoperates with existing Storage Area Network (SAN) infrastructures and is simple to deploy and manage.

The Brocade® 7500E Extension Switch, leveraging leading-edge Brocade 7500 technology, provides the performance, ease of use, and cost-effectiveness required to meet these and other business requirements. The Brocade 7500E combines Fibre Channel over IP (FCIP) capabilities with fabric isolation for point-to-point connectivity of remote SAN fabrics or Fibre Channel storage over IP Wide Area Networks (WANs) without merging fabrics.

By avoiding fabric merges, the Brocade 7500E provides WAN link and remote SAN fault isolation to increase availability for mission-critical applications and to minimize the impact of network failures. As a result, it is ideal for supporting strategic initiatives for disaster recovery, business continuity, and data migration.

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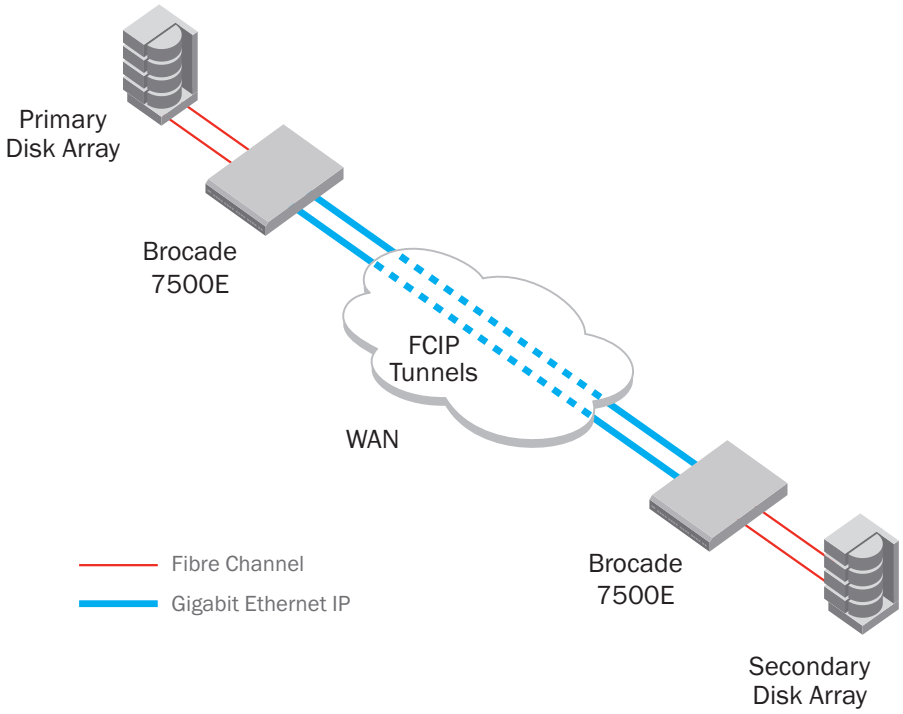
Figure 1.
Connecting directly to remote Fibre Channel storage, the Brocade 7500E reduces the cost of business continuity and remote data migration.



A bundled package, the Brocade 7500E includes two 4 Gbit/sec Fibre Channel ports and two 1 Gigabit Ethernet ports; redundant power supplies and fans; and advanced functionality to optimize storage application performance and resiliency across extended distances. An easy-to-use GUI simplifies deployment and management, reducing administrative time and costs.

The Brocade 7500E is interoperable with existing Fibre Channel and IP storage and network assets, and it provides a transparent upgrade path to additional ports and advanced functionality—making it a reliable entry-level or remote site FCIP solution with proven investment protection.

PERFORMANCE-OPTIMIZED SAN EXTENSION

To deliver high performance, resiliency, and resource optimization, the Brocade 7500E provides the following advanced SAN extension capabilities and features:

- Write acceleration (Fast Write for FCIP) capabilities to significantly improve application response time over distance
- Hardware-based compression to optimize bandwidth utilization and reduce costs
- Storage-optimized TCP for unprecedented network resiliency, even when using sub-optimal WAN links
- Remote SAN connectivity without merging fabrics—providing a more secure and reliable distance-connectivity solution

As a result, the Brocade 7500E helps provide a high-performance point-to-point remote data replication solution over any distance, improving global data mobility for greater operating efficiency.

SIMPLIFIED DEPLOYMENT AND ADMINISTRATION

To help organizations quickly and effectively deploy and manage new remote data replication solutions, the Brocade 7500E includes everything needed for SAN extension, including Fast Write and compression capabilities. In addition, intuitive Web-based management tools streamline deployment and reduce administration time.

Because the Brocade 7500E leverages the standard Brocade Fabric OS® (FOS) and Brocade management tools, it provides a consistent, centralized management platform that minimizes training and deployment time while significantly reducing

overall costs. And with qualifications by all leading storage vendors, the Brocade 7500E provides a proven, interoperable solution.

COMPLETE INVESTMENT PROTECTION

As organizations evolve, they often face investment protection challenges. To protect storage and networking investments, the Brocade 7500E is interoperable with existing Fibre Channel SAN and IP environments, including Brocade switch and router platforms. Moreover, the Brocade 7500E is upgradable to full Brocade 7500 capabilities with a simple software license upgrade for higher scalability and advanced functionality.

This "pay-as-you-grow" strategy helps organizations minimize upfront costs and protect future investments as their business needs change.

MAXIMIZING SAN INVESTMENTS

Brocade and its partners offer complete solutions to meet a wide range of technology and business requirements. These solutions include education and training, support, and services to help optimize technology investments. For more information, contact an authorized Brocade sales partner or visit www.brocade.com.

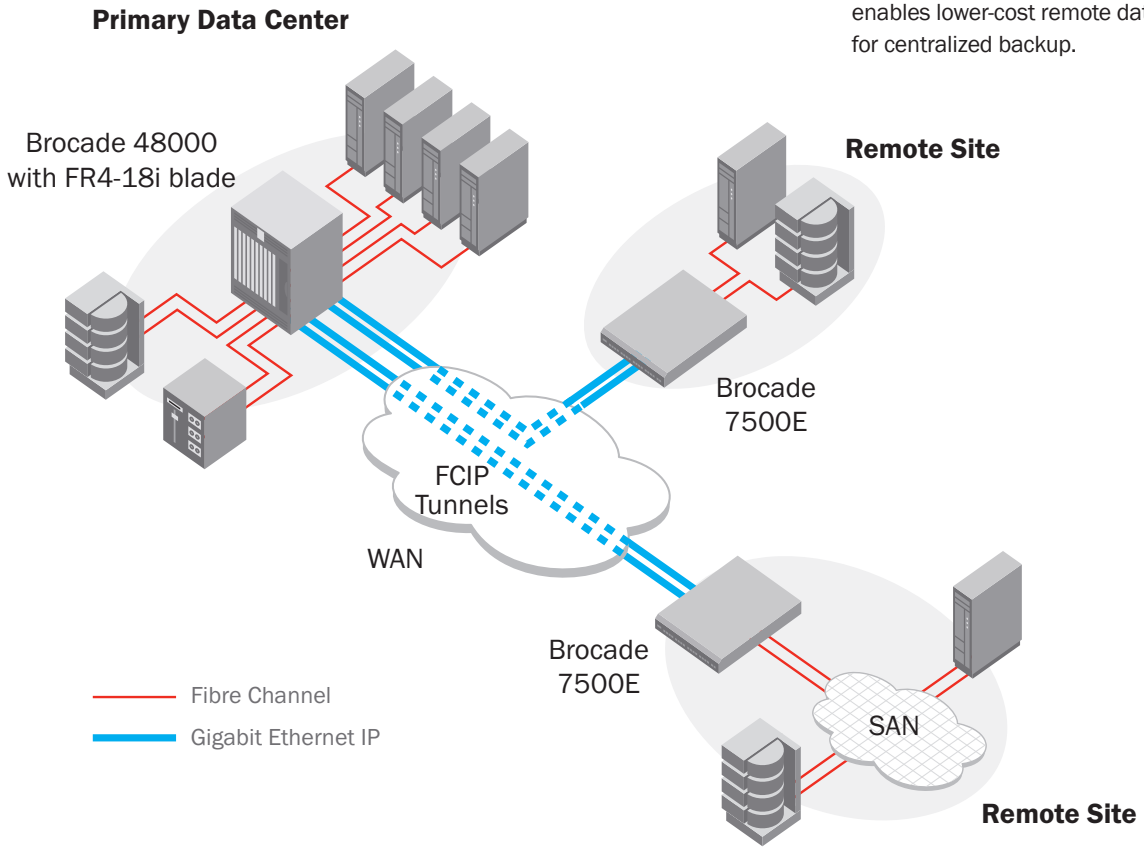


Figure 2.
Interconnecting remote SAN fabrics to a central data center, the Brocade 7500E enables lower-cost remote data replication for centralized backup.

BROCADE 7500E SPECIFICATIONS

System Architecture	
Ports	4 ports: 2 Fibre Channel (E, F, FL, EX) ports and 2 Gigabit Ethernet (VE, VEX) ports; software license upgrade available to activate 14 additional Fibre Channel ports
Port speeds	Fibre Channel: Auto-sensing of 1, 2, and 4 Gbit/sec port speeds Ethernet: 1.25 Gbit/sec
WAN aggregate bandwidth	200 Mbit/sec aggregate throughput (uncompressed, full duplex); compressed throughput will be significantly higher depending on the compressibility of the data; software license upgrade available for Gigabit Ethernet line rate performance.
Fabric latency	30 microseconds (FCIP)
Maximum frame size	2112-byte payload for Fibre Channel, 2250-byte payload for Gigabit Ethernet, 2048-byte payload for Fibre Channel routed networks
Classes of service	Class 2 and 3
Port types	FL_Port, F_Port, EX_Port, and E_Port; self-discovery based on switch type (U_Port); Gigabit Ethernet for VE and VEX
Media types	Hot-pluggable, industry-standard Small Form-factor Pluggable (SFP), LC connector; Short-Wavelength Laser (SWL) up to 500 meters (1640 feet); Long-Wavelength Laser (LWL) up to 10 km (6.2 mi); Extended Long-Wavelength Laser (ELWL) up to 80 km (49.6 mi); distance depends on fiber-optic cable and port speed, CWDM SFPs (8 lambdas); RJ45 Copper SFP for Gigabit Ethernet ports
Fabric services	Simple Name Server, Registered State Change Notification (RSCN); Brocade FC-FC Routing Service, Brocade Advanced Zoning, and Brocade Web Tools; optional fabric services include the Brocade FCIP Tunneling Service, Brocade Accelerator for FICON, and Brocade Advanced ISL Trunking
FIPS certification	FIPS 140-2 Level 2-compliant package available

Management	
Supported management software	Telnet; SSH; RADIUS; SNMP (FE MIB, FC Management MIB); Web Tools; Fabric Manager; third-party applications utilizing the Brocade SMI Agent
Management access	10, 100 Mbit/sec Ethernet (RJ-45), serial port
Diagnostics	POST and embedded online/offline diagnostics

Mechanicals	
Enclosure	Non-cable-side to cable-side airflow; power from cable side; 1U, 19-in. EIA rack-compliant
Size	Width: 42.87 cm (16.88 in) Height: 4.30 cm (1.69 in) Depth: 64.56 cm (25.40 in)
System weight	13.7 kg (30.2 lb) with two power supplies, no SFPs

Environmentals	
Temperature	Operating: 10°C to 40°C; Non-operating: –25°C to 70°C
Humidity	Operating: 20 to 85%, non-condensing Non-operating: 20 to 85%, non-condensing
Altitude	3 km
Shock	Operating: 105 G, 2.5 ms, half-sine Non-operating: 40 G, 13 ms, trapezoidal
Vibration	Operating: 0.5 G (5–500–5Hz) Non-operating: 2.0 G (5–500–5Hz)
Heat dissipation	410 BTU per hour
CO_2 emissions	846 kg per year

Power	
AC input	Nominal 1.0 A at 100–120 VAC; 0.5 A at 200–240 VAC
Frequency	47 to 63 Hz

For information about supported SAN standards, visit www.brocade.com/sanstandards

For information about switch and device interoperability, visit www.brocade.com/interoperability

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